Discount Promotions and Impulse Buying Behaviour among E Commerce Consumers in Bangladesh

Md. Asadulla Al Galib

Lecturer, Marketing, Rajshahi Cantonment Public School and College

DOI: https://doi.org/10.47772/IJRISS.2026.101000751

Received: 23 October 2026; Accepted: 28 October 2026; Published: 17 November 2026

ABSTRACT

Discount offers can stimulate the impulse to buy – both financially and fun aspect. This study explores the relationship between discount promotions and impulse buying behavior of e-consumers in the perspective of Bangladesh market with two parallel mediators perceived saving and shopping enjoyment. The analysis is based on 390 eligible, complete records and 20 indicators on five-point agreement scales. Consistent partial least squares structural equation modelling is used to assess the reflective measurement model and structural relationships. The percentile confidence intervals are from 9,594 valid bootstrap estimates and are used for inference. Discount promotions have a positive relationship with impulse buying behavior (β = 0.230), perceived savings (β = 0.455), and shopping enjoyment (β = 0.311). The results showed a positive relationship between perceived savings (β = 0.313) and shopping enjoyment (β = 0.305) and impulse buying behaviour. Both specific indirect effects are positive, through perceived savings (β = 0.142, 95% CI 0.084–0.211) and shopping enjoyment (β = 0.095, 95% CI 0.057–0.146). The total association of discount promotion and impulse buying behaviour is 0.467 and the model accounts for 38.4% variance in impulse buying behaviour. Average variance extracted is 0.52 for all constructs and internal consistency estimates are 0.84. Prediction error is lower in ten-fold cross-validation than in the linear benchmark for each of endogen's fifteen indicators. Results indicate that perceived monetary value and pleasurable browsing have a combined effect on explaining the relationship between promotional appeal and spontaneous purchase. Practical implications relate to transparent information about savings, easy-to-understand promotional design, and consumer control in spending.

Keywords: discount promotion; perceived saving; shopping enjoyment; impulse buying behaviour; eCommerce; Bangladesh; structural equation modelling.

1. INTRODUCTION

Discount promotions focus on the discounts when making an online purchase. When a consumer walks through a store environment to buy a specific product, they might see a price reduction on similar products, purchase add-on items, or the dealership may provide an incentive that makes it easier to make an immediate purchase (Thakur et al., 2020). These meetings connect a number of judgments. The offer has to be attention getters, the price cut has to look good, and shopping experience has to maintain interest. It is therefore essential to study the meanings consumers give to the promotion offers as well as the offers themselves to understand the nature of impulse buying.

Promotional exposure and promotional evaluation are particularly pertinent for the current study. A discount is not always seen as a value to the consumer. The discount promotions construct comprises of assessments of attractiveness, substantial price reductions, worthwhile reductions, appeal, and overall persuasiveness (Rani & S, 2023). It tells how much they think it has been reduced, not how much it has been reduced by an outside assessment. This distinction provides a conceptual starting point: the analysis focuses on whether positive discount evaluations are associated with increased perceptions of savings, greater shopping pleasure and

increased self-reported spontaneous purchases.

An economic explanation of this relationship is perceived savings. When the price drops, the customer feels it has become more affordable – in his or her mind, he or she thinks, "Now I can get the same product for a lower price, or buy more for the same dollar amount." These appraisals can make a purchaser think about making a purchase when he didn't intend to do so. There is not a single mechanism – it is low price. The interpretation that the promotional transaction provides a genuine monetary benefit is that of the consumer (Ronaldo Yolanda Putra et al., 2022). A product can become more attractive when the opportunity to save becomes part of the reason for buying a product.

An experiential explanation is shopping enjoyment. Browsing may be entertaining, pleasant, exciting or fun. These experiences are given more value than just a product when one browses and it is a promotional shopping that triggers them. Sustaining exploration and engaging in unexpected product by enjoying (Hernita et al., 2022). The integrated account therefore regards perceived savings and enjoyment as potential links between promotion appeal and impulse purchase and illustrates a direct link when both mechanisms are introduced.

The central research question is: What is the direction of the relation between the discount promotion and the impulse buying behaviour both directly and indirectly via perceived savings and shopping enjoyment? Three objectives follow. The first is to determine if the four constructs can be measured using separate reflective measurement blocks. The second is to estimate the five direct and the two specific indirect relationships (Zhang & Shi, 2022). The third is to assess explained variance and predictive performance to ensure that the interpretation goes beyond statistical significance to the model's empirical utility.

The paper takes an integrated economic and experiential approach to a model of promotional purchasing (Lee et al., 2021). It provides information about measurement quality, direct relations, parallel mediation, effect decomposition and predictive assessment in a single analytical structure. Results show that both pathways, the savings and enjoyment, have positive indirect associations (in addition to the positive direct association). The analysis thus suggests that the context of a promotion can be considered more of a multidimensional purchasing behavior, where a financial interpretation and enjoyable engagement work side by side (Martaleni et al., 2022). Development of hypotheses, analytical approach presented, results, theoretic and practical implications.

2. LITERATURE REVIEW

2.1 Discount promotions and impulse buying behaviour

Impulse buying behaviour was identified here by unplanned purchases, spontaneous purchases, purchases made due to a sudden urge, purchases made without proper prior consideration, and purchases made that were not in the original plan. These indicators apply to expressions of spontaneity that relate to each other. They don't always view an on-sale as a hasty buy (Desai, 2020). A consumer can plan and wait for a sale or compare options before making a planned purchase. The current approach is to determine if increased tendency to exhibit the spontaneous actions that the instrument measures are accompanied by increased promotion of the object (Lamis et al., 2022).

The discount promotions can be linked to impulsive buying as it alters the attractiveness of the purchase occasion at the moment. An offer has the ability to shift focus from the initial shopping goal to an unexpected product (Secapramana et al., 2021). It can also justify an extra occasion for making a transaction within the context of a person's ongoing surfing session. When an attractive reduction is salient, a consumer might change the attractiveness of what he wanted to buy, and reconsider buying an item that may not have been planned initially (Wahyuni & Setyawati, 2020). The framework thus expects that evaluating discounts will be positively associated with self-reported impulse buying.

A direct relationship is conceptually relevant even if the notions of saving and enjoying are taken into account. Promotional appeal can be a general assessment that goes beyond only monetary value and positive shopping experience (Anugrah et al., 2023). By adding a direct path, one does not assume that the selected mediators are the only ones that span the relationship. It also enables separation of the association that is left over after considering the mediators from the association that is mediated. The first hypothesis, H1, suggests that a positive relationship exists between discount promotion and impulse buying behaviour of the E-commerce consumers of Bangladesh (Christanto & Aprillia, 2023).

2.2 Discount promotions and perceived savings

Perceived savings refers to consumers' perceptions that promotional purchases actually save money, allow them to buy the same products for less money, make better use of their shopping money, and offer them real monetary savings. These judgements are related to the subjective value of the transaction, with respect to economic aspects (Sherlin et al., 2022). They're not the same as promotional appeal as an offer can grab attention but lack effective belief that the final purchase will save money. The separation of the constructs enables the model to investigate the possibility of the presence of a specific economic interpretation (perceived savings) when favourable evaluations of promotions are present (Temel & Armağan, 2022).

An attractive cut is a basis for a favourable comparison between the promotional price and a reference expenditure. The difference may be viewed by the consumer as money saved, or as an increase in his or her purchasing power, or as the ability to use a specific amount of money they have available in a different way (Wang et al., 2022). Not every time one needs to use such comparisons does one need a precise calculation. They can be generated when a person thinks a deal is worth the while. However, the direction of thought seems apparent: the more attractive the discount, the more likely it is to be believed that bought products will offer monetary benefits (Gatot Wijayanto et al., 2023).

The framework consequently considers perceived savings to be an internal evaluation linked to the promoting stimulus. The formulation relates the price-users' view of the offer, on the surface presented, to a more specific evaluation of the financial usefulness of the offer (Marjerison et al., 2022). A positive relationship would suggest that there is a certain amount of consumer knowledge regarding the economic benefit they receive in purchasing the item at the reduced price. H2 suggests that the discount promotions are positively related to consumers' perception of savings in ecommerce in Bangladesh.

2.3 Perceived savings and impulse buying behaviour

If people think they are saving money, it's easier to accept an unplanned purchase (Bashar et al., 2023). A consumer sees a purchase as a good value if the same product looks like it is priced lower. The saving is included in the decision justification even if the product didn't necessarily need to be bought. An unexpected offer can then follow from an interesting observation to a reason for immediate buying (Yaprak & Coban, 2023). This possibility is captured in the model by the relationship between perceived savings and impulse buying after removing the influence of the promotional appeal and enjoyment.

The saving (as perceived) and the total expenditure are independent parts of the decision (Usadi et al., 2023). You can save money while spending more than you had planned for spending relative to an alternative price. The psychological mechanism is the perceived attractiveness of the exchange, determined at the time of the exchange. A consumer may think that if she doesn't take the discount then she is giving up an economic benefit, but that if she takes the discount, then her shopping basket is enlarged (Thakur et al., 2020). This interpretation can clarify why an economic framed perception can be positively related to spontaneous buying instead of just budget planning.

2.4 Discount promotions and shopping enjoyment

The enjoyment of shopping is related to participation on the web discount offer. It indicates enjoyment,

entertainment, pleasantness, excitement and fun (Rani & S, 2023). These are factors that set the experiential benefits of going shopping in reduced-price terms apart from the dollar savings for purchasing. Both may exist in the same promotional environment, but the constructs ask different questions (Ronaldo Yolanda Putra et al., 2022). Perceived savings refer to the monetary value of the deal involved in a transaction, while shopping enjoyment refers to the consumers' experience of the shopping and exploration process during promotions.

Interesting deals can ensure that online shopping is an engaging experience, helping to create interesting comparisons and opportunities for discovery (Hernita et al., 2022). Exploring offers can mean discovering a product that is appealing, comparing offers available, or even a surprising offer in line with one's interests. All these experiences can make the shopping a fun process even before they become the customer. This account makes a discount relevant, since it alters the experience of engagement, as well as the apparent terms of exchange (Zhang & Shi, 2022). So, there should be a positive correlation between promotional appeal and the shopping enjoyment in the presence of discounts reported.

The model demonstrates that there is a direct link between a discount promotion and shopping enjoyment, with no intervening perceived savings (Lee et al., 2021). An experiential connection is represented with this parallel structure, one that is not exclusively determined by economic evaluation, and where enjoyment can be the primary determinant. It further enables the two mediators to make their contribution individually for explaining impulse buying (Martaleni et al., 2022). H4 suggests that there is a positive relationship between discount promotions and shopping enjoyment of the e-commerce consumers in Bangladesh.

2.5 Shopping enjoyment and impulse buying behaviour

A pleasant shopping experience can keep people interested in products that they didn't specifically come in to purchase. If exploration is fun in itself, consumers could stick around for offers and even think about other products (Secapramana et al., 2021). The experience can serve to make it more fun to continue the browsing process and make spontaneous purchases more like an extension of that pleasurable experience. The theory thus suggests that there should be a positive relationship between enjoyment and impulse buying, with the appeal of the discount and perceived monetary benefits partialled out.

2.6 Parallel mediation through savings and enjoyment

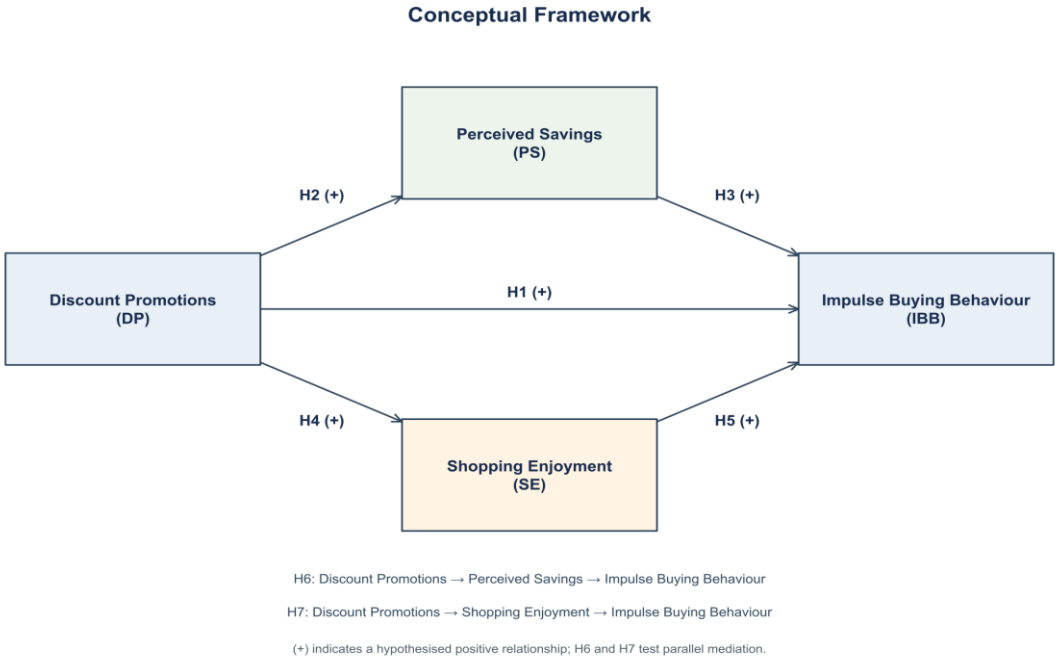
The perceived savings pathway is a combination of two relationships: the first is that perceived promotional appeal is related to the perceived monetary benefit, and the second is that perceived monetary benefit is related to impulse buying. Their product is the indirect association that is particular, through savings (Anugrah et al., 2023). This pathway describes how a positive perception of a promotion can lead to a purchase by means of an economic interpretation of the promotion. It's particularly helpful in separating an offer's general appeal from any specific conviction that the purchase on the offer will result in a decent financial return (Wahyuni & Setyawati, 2020).

The shopping enjoyment pathway connotes that the appealingness of the merchandise is related to the enjoyment of shopping, which is related to impulse buying (Christanto & Aprillia, 2023). It is a connection that is experiential – that is, attractive promotions lead to pleasant engagement, and pleasant engagement leads to easier and quicker purchasing. This pathway is evaluated by the parallel specification, as well as perceived savings and the direct promotional relationship. The H6 states that the lag is positive, and perceived savings is the mediator between discount promotions and impulse buying behaviour. H7 postulates that positive relationship between discount promotions and impulse buying behaviour is mediated by shopping enjoyment (Sherlin et al., 2022).

The conceptual framework is shown in figure 1. Parallel mediators are perceived savings and shopping enjoyment; the antecedent construct is discount promotion, and outcome is impulse buying behaviour (Temel & Armağan, 2022). There are 5 direct routes and 2 identified indirect routes. There is no structural relationship defined between perceived savings and shopping enjoyment. This configuration emphasizes their individual

contribution and allows the estimation of direct, indirect and total associations without assuming any ordering between the two internal responses (Wang et al., 2022).

Figure 1 Conceptual framework



3. METHODOLOGY

3.1 Research design and analytical sample

This study adopts a quantitative survey method with four consumer behaviour constructs. The online purchasing and discount promotion exposure in the questionnaire uses a six-month recall period. Eligibility criteria include voluntary consent, at least eighteen years of age, presently living in Bangladesh, having online purchase within the last six months and having seen an online discount within the last six months. These conditions make sure the analytical population and the shopping experiences measured by the measurement items are aligned.

In the screening output there are 390 imported records. Each of the 390 passes 5 recorded consent/eligibility checks. There are no out-of-range responses (1 to 5) that are invalid or non-integer. The complete-case rule (missing measurement items) is not applied to exclude any record. This means that the resulting analytical sample is 390. No identical full response patterns are obtained from the diagnostic checks and no straight-line answers across the measurement items. This screening sequence is summarised in Table 1 without further unrecorded assumptions of recruitment or fieldwork.

Participant information provides information about the voluntary nature of the Participation and enables the Respondent to terminate the participation beforehand. The questionnaire does not ask for names, phone numbers, or e-mail addresses, and states that analysis will be done collectively for academic purposes (Adaikkalam Zabihi et al., 2025). The provisions are those through which the instrument approaches participation and direct identifiers. Analysis is based on coded eligibility and response data provided in the results and respondent characteristics are reported in total.

Table 1 Data screening and analytical sample

Excluded	Remaining
0	390

0	390
0	390
0	390
—	390

3.2 Construct operationalisation

There are five reflective indicators for each construct. The answers are on a scale of 1 (strongly disagree) to 5 (strongly agree), with 3 representing neither agree nor disagree (Harwood, 2023). Discount promotion reflects perceived attractiveness, significant reduction, worthwhile reduction, appealing deals and overall persuasiveness. Perceived savings include money savings, buying the same products at lower prices, lower payments, better allocation of money and reduced spending. The five indicators in each block provide related expressions of the underlying construct rather than separate components to be added as distinct dimensions.

Enjoyment of shopping is determined by items that describe enjoyment, entertainment, pleasantness, excitement and fun in relation to shopping and promotion. Impulse buying behaviour has been measured by unplanned purchases, spontaneous purchases, purchase from a sudden urge, limited previous deliberation and extra purchasing activity. Each of the twenty statements is in the same form of agreement and represents the defined shopping experience (Mimansha Patel & Nitin Patel, 2019). The instrument in this way ensures one response domain and also offers the dissociation of promotion, perceived economic benefit, experiential response and reported behaviour.

Descriptive scores for the five items, calculated as Arithmetic means. These scores will be used for summary statistics and Pearson correlations. The values of the latent constructs obtained from the consistent partial least squares model are used in the structural analysis. Such descriptive correlation and structural coefficients are not confused when these two types of reporting of expongs are kept. The hypotheses are about the relationships that are modelled, while the item average summaries are about the location, dispersion and bivariate pattern of the responses that are recorded.

3.3 Measurement and structural assessment

Indicator loadings, squared loadings, average variance extracted, Cronbach's alpha, rho_A and composite reliability are used to assess the reflective model. These measures are answers to related but different questions. There are loadings that indicate the relationship between each indicator and its construct. Average variance extracted gives an indication of the variance captured over a block (Shiferaw et al., 2022). Internal consistency estimates are used to look at the coherence between the indicators. The five indicators of each construct remain the same as in the reported specification, and there is consistency between the conceptual definition of the constructs and the results of the model being presented.

A heterotrait–monotrait ratio and their bootstrap confidence intervals are used to assess the discriminant validity. Inner variance inflation factors measure the amount of collinearity within each set of endogenous predictors. The structural assessment writes the standardised path coefficients, bootstrap standard errors, test statistics, normal-approximation p values and percentile confidence intervals (Chen, 2023). The positive direction of the estimated relationship and the confidence intervals not containing zero, support the hypothesis decisions. For reported inference 9,594 valid bootstrap estimates have been obtained for the direct and indirect linkages.

R^2 and adjusted R^2 are reported as a measure of explained variance. The f^2 statistics present the additional variance accounted for by each predictor of the endogenous constructs. The specific indirect effects are calculated for the savings pathway and the enjoyment pathway and the total indirect association is the sum of both pathways. The total effect includes the direct and total indirect estimates (Balwan et al., 2022). These decompositions contribute to a coherent understanding of the distribution of the overall link between the promotional appeal and impulse buying across the model.

3.4 Predictive assessment

Predictive assessment is based on the output of the seminr "earliest-antecedent prediction procedure. Settings are set to 10 folds, 1 repetition and 20261026 random seed. The assessment contains root mean squared error, mean absolute error for the 15 endogenous indicators and linear-model benchmark. This comparison assesses whether the fitted framework makes useful predictions for observations held back under the given cross validation partition (Moura & Neves, 2025). Construct-level prediction errors are also examined, to check in-sample vs. out-of-sample performance.

3.5 Sampling and Data Collection

The eclectic mix of adult consumers participating in ecommerce was achieved through a combination of purposive sampling and convenience sampling. The questionnaire was administered via a structured online questionnaire among Facebook shopping groups and messenger and WhatsApp groups from July to August 2026. The respondents participating in the study were recruited from urban, semi-urban and rural consumers. In order to respond, they had to be at least 18 years old, be from Bangladesh, and have recently shopped online and received a discount promotion in the past six months.

Each subject indicated informed consent before filling out the questionnaire and the participation was voluntary and anonymous. After eligibility and completeness checks, 390 responses were retained comprising 131 semi-urban, 141 urban and 118 rural. Sample adequacy was assessed for the four constructs of the model, 20 indicators and maximum of three predictors for an endogenous construct. The achieved sample supported the model for the estimation of the specific PLS-SEM model.

4. RESULTS

4.1 Screening and respondent characteristics

All 390 records in the screening results are retained. All records are coded to indicate they meet consent, age, residence, online purchasing and discount exposure criteria. The range of measurement responses is within the acceptable integer range and there are no exclusions in the complete case assessment. The net effect of this is that the final sample is the same as the imported sample (Thakur et al., 2020). Also, when there are no duplicate full response patterns and no straight-line measurement patterns, this information is noted as well in the diagnostic output. These checks set up the data set to be used throughout the descriptive and model-based analyses.

All five age categories are represented among respondents. The majority age group is 25 to 34 years with 99 records or 25.4% of the sample. The 35–44 category contains 80 records, or 20.5%, followed by 45–54 years with 72, or 18.5%. Respondents aged 18–24 account for 70 records, or 17.9%, and those aged at least 55 account for 69, or 17.7%. These variables give information about the sample analysed and explain the reported shopping experiences.

The gender categories include 94 females, 103 males, 100 who identified as another gender and 93 who did not specify gender. The employment group with the greatest number of students is employed as students (26.4%). The other income groups range from 10.3% to 13.3% of the respondents, with the exception of the nondisclosure group which makes up 11.5% of the respondents and the respondents without personal income making up 28.7%. The semi-urban population is 36.2%, urban residents 33.6% and the rural population 30.3%. The complete distribution of the demography is shown in Table 2.

Table 2 Demographic characteristics

Category	n	%
18-24	70	17.9
25-34	99	25.4

35-44	80	20.5
45-54	72	18.5
55+	69	17.7
Woman	94	24.1
Man	103	26.4
Another identity	100	25.6
Prefer not to say	93	23.8
Below secondary	37	9.5
SSC or equivalent	53	13.6
HSC or equivalent	63	16.2
Diploma or equivalent	57	14.6
Bachelor's degree	62	15.9
Postgraduate degree or above	54	13.8
Other	64	16.4
Student	103	26.4
Salaried employee	62	15.9
Self-employed/business	52	13.3
Homemaker	36	9.2
Unemployed	45	11.5
Retired	48	12.3
Other	44	11.3
No personal income	112	28.7
Below BDT 15,000	52	13.3
BDT 15,000-29,999	44	11.3
BDT 30,000-49,999	48	12.3
BDT 50,000-74,999	40	10.3
BDT 75,000+	49	12.6
Prefer not to say	45	11.5
Urban	131	33.6
Semi-urban	141	36.2
Rural	118	30.3

4.2 Online shopping profile

Occasional and frequent buyers of a product or service are both considered to be shopping frequency distributions. 85 respondents or 21.8% report less than monthly purchases and 77 or 19.7% report purchases about once per month. Sixty-eight (17.4%) say they make 2-3 purchases per month. 76 records represent a weekly buying frequency (19.5%) and 84 respondents (21.5%) follow a buying frequency higher than once a week. The sample consequently contains varying degree of involvement with shopping over the six months reference period.

Marketplaces, retailer sites or apps, Facebook, other social media and other channels are the most common channel categories. Other channels have 22.6%, other social media 21.5%, marketplaces 19.0 % and retailer channels 18.5% each. Books/stationery is the biggest product category with 17.4% and beauty/personal care with 15.9%. The full shopping profile is shown in Table 3. The distributions may be used to give context to the sample without suggesting that there were any differences in the relationships between the channel or product category structures.

Table 3 Online shopping characteristics

Category	n	%
Less than monthly	85	21.8
Monthly	77	19.7
2-3 times monthly	68	17.4
Weekly	76	19.5
More than weekly	84	21.5
Marketplace website/app	74	19
Brand/retailer website/app	72	18.5
Facebook	72	18.5
Other social media	84	21.5
Other	88	22.6
Clothing/footwear/accessories	49	12.6
Beauty/personal care	62	15.9
Electronics/accessories	53	13.6
Groceries/household essentials	46	11.8
Home/living	54	13.8
Books/stationery	68	17.4
Other	58	14.9

4.3 Descriptive statistics and correlations

On the five-point scale Item refers to a range from 3.169 to 3.300. The entire observed response range of 1 to 5 is used for every item. Standard deviations are between about 1.162 and 1.278, suggesting variability about the item means. Small and negative values were obtained for the skewness (between −0.256 and −0.057) and excess kurtosis (between −1.046 and −0.789). These statistics encompass responses which are focused moderately above the midpoint, yet there are still some responses spread out within the possible ranges.

Perceived saving is the highest item mean (3.248) followed by impulse buying behaviour (3.226), discount promotion (3.213) and shopping enjoyment (3.208) at the construct level. Construct standard deviations are between 0.929 and 0.972. The means differences were relatively small, which suggests that the endorsement was across the board for these 4 constructs. They should not be interpreted as tests for differences because there is no statistical test for the difference in the construct meanings.

The correlation of each of the 6 bivariate constructs is positive. The correlation of discount promotions with perceived saving is 0.386, with shopping enjoyment is 0.262, and with impulse buying is 0.399. The correlation is 0.400 between perceived savings and impulse buying and 0.360 between shopping enjoyment and impulse buying. The correlation coefficient between the saving and enjoyments is 0.139. This structure reflects positive relationships throughout the proposed framework and the fact that the two mediators are not substitutes for each other as descriptive tools. Construct summaries and correlations are merged in table 4 for comparison purposes.

Table 4 Construct means standard deviations and correlations

Mean	SD	DP	PS	SE	IBB
3.213	0.964	1	—	—	—
3.248	0.959	0.386	1	—	—

3.208	0.929	0.262	0.139	1	—
3.226	0.972	0.399	0.4	0.36	1

4.4 Reliability and convergent validity

IC estimates for the four constructs are very similar. Discount promotions, perceived savings, shopping enjoyment and impulse buying behaviour have Cronbach's alpha values of 0.851, 0.851, 0.843 and 0.857 respectively. The rho_A value associated with each factor ranges from 0.853 to 0.860 and the composite reliability ranges from 0.842 to 0.857. These estimates when put together support coherent measurement of the four constructs in the reported specification. The results for reliability and average variance extracted are shown in Table 5 along with the ranges of loading.

The average variance extracted of the two factors discount promotions, perceived savings, shopping enjoyment and impulse buying behaviour is 0.533, 0.536, 0.521 and 0.547 respectively. So, each construct explains over half of the average indicator variance for the estimated reflective model. Loadings range from 0.664 to 0.782 for discount promotions, 0.670 to 0.793 for perceived savings, 0.584 to 0.893 for shopping enjoyment, and 0.693 to 0.813 for impulse buying. Table 6 displays each loading to ensure that the results of each item are maintained along with the overall measures.

The highest individual loading is SE3, 0.893 which represents the delightfulness of searching through online discount offers. In the block of impulse buying, IBB3 has the highest loading among all the blocks (0.813), and it is “buy on impulse” block. PS3's discount promotion loading is 0.793, the highest and DP4's perceived savings loading is 0.782. The results include all twenty indicators and test their overall measurement properties against the same specification as the overall model.

Table 5 Internal consistency and convergent validity

Alpha	rho_A	rho_C	AVE	Loading range
0.851	0.853	0.85	0.533	0.664–0.782
0.851	0.855	0.852	0.536	0.670–0.793
0.843	0.858	0.842	0.521	0.584–0.893
0.857	0.86	0.857	0.547	0.693–0.813

Table 6 Reflective indicator loadings

Item	Loading	Squared loading
DP1	0.776	0.603
DP2	0.694	0.482
DP3	0.724	0.525
DP4	0.782	0.612
DP5	0.664	0.442
PS1	0.783	0.613
PS2	0.702	0.493
PS3	0.793	0.63
PS4	0.704	0.495
PS5	0.67	0.449
SE1	0.688	0.473
SE2	0.584	0.341
SE3	0.893	0.797

SE4	0.759	0.576
SE5	0.645	0.416
IBB1	0.698	0.487
IBB2	0.693	0.48
IBB3	0.813	0.662
IBB4	0.768	0.589
IBB5	0.72	0.518

4.5 Discriminant validity and collinearity

HTMT estimates range from 0.165 to 0.468. The highest ratio is related to perceived saving and impulse buying behaviour with the value of 0.468, followed by discount promotions and impulse buying with the value of 0.467. Discount promotions and perceived savings have a ratio of 0.454 and a ratio of 0.424 for shopping enjoyment and impulse buying respectively. The other two ratios are 0.309 for discount promotions/ enjoyment and 0.165 for savings/ enjoyment. All the point estimates are below 0.85 indicating the separateness of the four measurement blocks.

All bootstrap interval upper bounds are less than unity, between 0.282 and 0.563. This is in line with the view that the constructs represent specific aspects of promotional shopping. The inner VIF value of the predictors of impulse buying is as follows: discount promotions are 1.244, perceived savings is 1.180, and shopping enjoyment is 1.079. VIF=1.00 for the single predictor equations for savings and enjoyment. These values allow interpretation of the distinct conditional relationships with minimal redundancy in the predictors. The results of both assessments are summarised in Table 7.

Table 7 Discriminant validity and structural collinearity

HTMT	95% bootstrap CI
0.454	0.353–0.551
0.309	0.206–0.412
0.467	0.364–0.562
0.165	0.091–0.282
0.468	0.365–0.563
0.424	0.326–0.520

Inner VIF for impulse buying predictors: DP = 1.244; PS = 1.180; SE = 1.079. The single-predictor PS and SE equations each have VIF = 1.000.

4.6 Direct structural relationships

The percentile bootstrap confidence intervals for all five direct coefficients do not contain 0. There is a positive relationship between the discount promotion and impulse buying after the mediator controlled, which is β = 0.230, standard error = 0.064, and confidence interval = 0.101 – 0.349. Normal-approximation p value is obtained < 0.001. Thus, H1 is accepted. The direct association of the savings and enjoyment pathways are retained, meaning that there is still a positive relationship between the overall evaluation of promotions and the reported spontaneous buying.

H2 is supported with a β of 0.455 having a 95% confidence interval of 0.358–0.553, that is the highest direct path relationship among the variables in the study. The value of perceived savings positively correlates with the impulse buying with 0.313 correlation coefficient, and the range of 0.199 - 0.426 supports H3. These

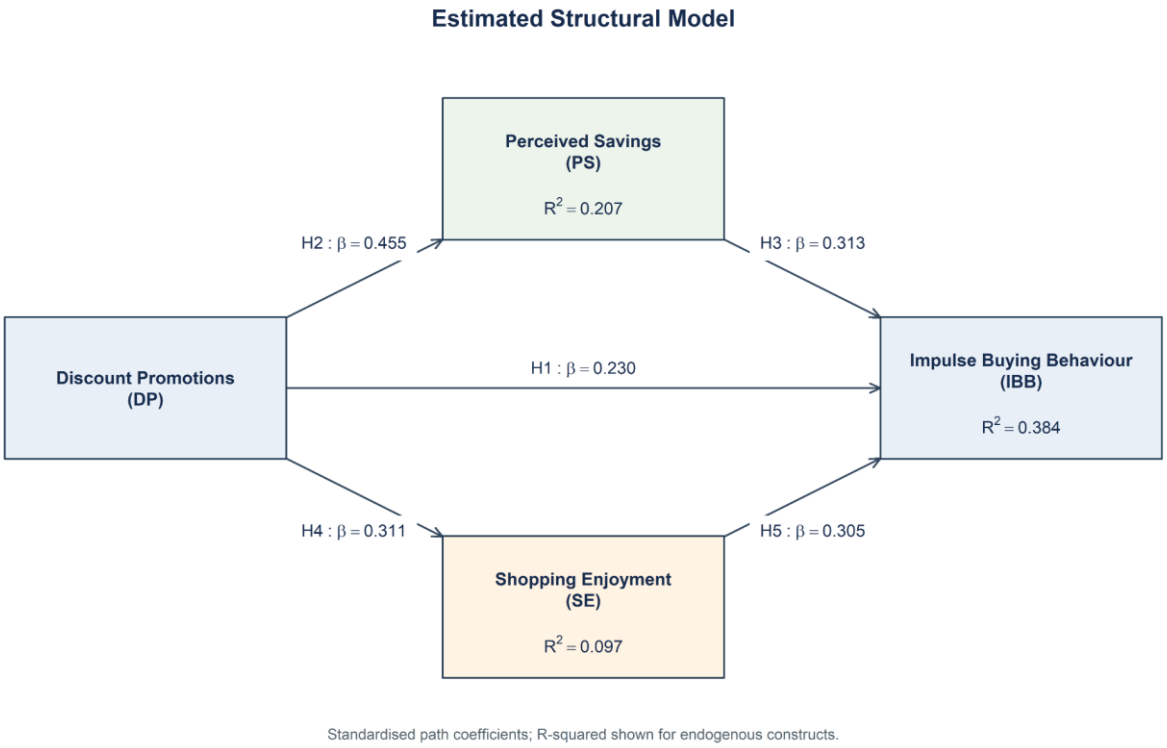
estimates are the two parts of the proposed economic pathway. The more promotions have an appeal the more the savings perceptions are and the more impulse buying takes place in the equation of the outcome.

H4 was also supported, with a β value of 0.311 and a confidence interval ranging from 0.212 to 0.416 for the discount promotions and shopping enjoyment relationship. Shopping enjoyment is positively related to impulse buying (β = 0.305, CI: 0.209-0.405) as predicted in H5. The two mediator-to-outcome coefficients are quite similar in value. The analysis indicates a positive contribution for each of them; however, statistically significant difference between them is not found. Direct effects and hypothesis decisions are presented in Table 8 and the resulting estimated structural model is shown in Figure 2.

Table 8 Direct structural effects and hypothesis decisions

Path	β	SE	t	p	95% CI	Decision
DP → IBB	0.23	0.064	3.603	< .001	0.101–0.349	Supported
DP → PS	0.455	0.05	9.105	< .001	0.358–0.553	Supported
PS → IBB	0.313	0.059	5.345	< .001	0.199–0.426	Supported
DP → SE	0.311	0.052	6.017	< .001	0.212–0.416	Supported
SE → IBB	0.305	0.05	6.092	< .001	0.209–0.405	Supported

Figure 2 Estimated structural model



4.7 Explained variance and incremental contributions

The model accounts for 20.7% of the variance in perceived savings and 9.7% of the variance in shopping enjoyment. The adjusted R^2 values are 0.205 and 0.095. The possible R2 value for impulse buying behaviour is 0.384, while the adjusted R^2 value is 0.380. Together, the promotional appeal and the two mediators explain

38.4% of the variance of the modelled outcome. The savings equation and the enjoyment equation reveal that the promotional appeal is closer to economic evaluation than it is to the experiential response in terms of the proportion of variance predicted in each equation.

The f^2 incremental for the discount promotions predicting perceived savings is 0.261. The value for shopping for happiness is 0.107. The f^2 of the impulse buying equation, is 0.063 for discount promotions, 0.124 for perceived savings and 0.136 for shopping enjoyment (Anugrah et al., 2023). These values augment the path coefficients by providing each predictor's value in relation to an equation lacking it. The sole antecedent and the two mediators both contribute in explaining impulse buying, and the largest incremental contribution to savings is from its sole antecedent. R^2 and f^2 are shown simultaneously in Table 9.

Table 9 Explained variance and incremental effect sizes

R^2	Adjusted R^2	Predictor f^2
0.207	0.205	DP 0.261
0.097	0.095	DP 0.107
0.384	0.38	DP 0.063; PS 0.124; SE 0.136

4.8 Specific indirect effects and effect decomposition

Indirect association through perceived savings is 0.142, with a standard error of 0.033 from bootstrapping and a confidence interval of 0.084–0.211 found using bootstrapped percentiles. The interval does not include 0 and it implies H6. The indirect associations through shopping enjoyment are 0.095, se=0.023, 95% confidence interval=0.057-0.146. This interval also excludes 0 which helps to support H7. The results thus confirm both the two possible statistical mediation pathways in the parallel model.

The direct relationship is also positive, and statistically supported, making the pattern consistent with partial mediation of a complementary nature. The direct estimate is 0.230, and the combined indirect estimate is 0.237, giving a total effect of 0.467. The confidence interval for the total indirect association is (0.166, 0.328); the confidence interval of the total effect is (0.367, 0.563). So, this overall association is not solely dependent on one specific pathway, but there are two positive mediated pathways as well.

The total association is about 50.8% on the basis of unrounded estimates; the indirect component constitutes. Approximately 30.5% is the savings pathway, and the enjoyment is approximately 20.3%. The decompositions are descriptive, not estimates of the proportion of purchases made each mechanism, but estimates of the effect. The savings pathway is numerically bigger, but a formal comparison of the two indirect effects is not made. The mediation estimates and total decomposition (intervals) are provided in Table 10.

Table 10 Specific indirect effects and effect decomposition

Estimate	SE	p	95% CI
0.23	0.064	< .001	0.101–0.349
0.142	0.033	< .001	0.084–0.211
0.095	0.023	< .001	0.057–0.146
0.237	0.041	< .001	0.166–0.328
0.467	0.05	< .001	0.367–0.563

H6 and H7 are supported. Direct and indirect inference uses 9,594 valid bootstrap estimates. Percentile intervals are reported; p values use the normal approximation.

4.9 Predictive performance

The out-of-sample RMSE and MAE of the PLS predictions are better than the out-of-sample RMSE and MAE of the linear benchmark with the ten-fold cross-validation approach when considering each endogenous

indicator individually. The PLS RMSE varies between 1.125 and 1.189 while the benchmark is 1.131-1.193 for perceived savings. For shopping enjoyment, PLS RMSE ranges from 1.143 to 1.177, compared with 1.146–1.184. In case of impulse buying behaviour, the PLS RMSE varies between 1.129 to 1.186 whereas it varies between 1.134 to 1.189 in case of impulse buying behaviour. In either case, the comparison always points to the PLS predictions in the conditions where the validation is performed.

The corresponding out-of-sample MSEs at the construct level are 0.854 for perceived savings, 0.932 for shopping enjoyment and 0.847 for impulse buying. Their in-sample equivalents are 0.844, 0.924, and 0.837. The relative increases reported are about 1.13%, 0.82% and 1.24%, respectively. These values demonstrate that the estimation and held-out observations for this partition have fairly similar errors. Indicator-level benchmark comparisons are shown in Table 11 and the prediction assessment is included as a complementary structural explanation.

Table 11 Out of sample indicator prediction errors

PLS RMSE	LM RMSE	PLS MAE	LM MAE
1.166	1.178	0.982	0.995
1.156	1.164	0.969	0.974
1.125	1.131	0.938	0.943
1.15	1.157	0.958	0.965
1.189	1.193	1.006	1.011
1.176	1.184	0.963	0.97
1.177	1.182	0.961	0.963
1.174	1.183	0.988	0.994
1.143	1.146	0.949	0.952
1.144	1.15	0.949	0.957
1.186	1.189	0.997	1.004
1.151	1.155	0.96	0.964
1.166	1.172	0.977	0.982
1.129	1.134	0.936	0.939
1.176	1.182	0.978	0.984

Ten folds, one repetition, seed 20261026; earliest-antecedent prediction. LM denotes the linear-model benchmark. PLS errors are lower for every indicator on both metrics.

5. DISCUSSION

5.1 Integrating economic evaluation and enjoyable shopping

The results point to the possibility that discounts promotions have a connection with impulsive purchasing both from an economic and an experiential standpoint (Hernita et al., 2022). The positive direct relationship indicates that good impressions of the promotion are associated with impulsive purchases once the two mediators are taken into account. This is then explained by the two positive indirect relationships. Additionally, those who believe offers to be more positive are more likely to believe that they experienced monetary benefits and more enjoyment and each of these is positively related to impulse buying in the joint model.

This kind of setup provides more than just a numerical price cut in relation to promotional appeal. The discount promotion items are centered on offers being appealing, valuable, and irresistible. Such assessments can relate to the usefulness of a transaction and to the browsing of it. The results consequently support analysing the promotion as an interpreted shopping opportunity (Zhang & Shi, 2022). It is behaviourally

relevant as manifested through the consumer's financial judgment and experiential involvement and through the lingering direct association.

The model also distinguishes constructs that are potentially casually blended in online deals discussions. Attractiveness of an offer, meaningful saving and enjoyable shopping experience are all different but related evaluations. The empirical results indicate that this distinction is valid, based on the discriminant validity results. The fairly low savings-enjoyment correlation also suggests that the economy's welfare and fun surfing do not necessarily elicit the same descriptive reaction. Together they share explanatory detail regarding two positive relationships with impulse buying in one outcome equation.

5.2 Interpretation of the perceived savings pathway

The highest specific indirect point estimate is the savings pathway. After controlling for promotion and enjoyment, perceived savings is most directly related to promotional appeal, which, in turn, is positively associated with impulse buying (Lee et al., 2021). This combination indicates an economic interpretation as a valid part of the modelled promotional relationship. A consumer can believe that they are saving money or stretching a budget so the purchase may even seem like an advantageous deal, despite the fact that the product wasn't bought in the first place.

This can be understood by looking at the difference between the transaction value and the planned expenditure. The discounted product could look like a decent deal when compared to another product, but it is still an addition to the consumers original shopping basket. So perceived savings do not necessarily equate with a commitment to a previous spending plan (Martaleni et al., 2022). This is because the instrument reflects the belief that promotional buying offers monetary benefits and the outcome reflects spontaneous behaviour. There is a positive relationship between them that is in tandem with economic justification and unplanned purchase.

The effect of complete savings pathway (indirect effect) is depicted by the average indirect estimate of 0.142. It has a positive confidence interval and a statistical linkage was proposed. Simultaneously, the characterisation of the size of this pathway should be read in the context of the overall decomposition. The savings accounts for about 30.5% of the total estimated association, with the direct and enjoyment aspects being positive. Interpretation of the economy is thus a significant element of the described pattern, but not its only organising system.

5.3 Interpretation of the shopping enjoyment pathway

A second positive indirect pathway is joy while shopping. Attractive promotion is correlated with being a more pleasurable shopping experience, and the conditional relationship between pleasant shopping experience is positive for impulse buying. This discovery lends validity to the idea of viewing promotional browsing as an experience all its own. Looking through offers can be a pleasurable or exciting experience for the consumer, so in an experiential context, an unexpected product may prove attractive enough for the consumer to make a spontaneous purchase (Desai, 2020).

The enjoyment to impulse buying coefficient is quantitatively comparable with the corresponding saving coefficient. This is important because the smaller enjoyment indirect effect is partly due to the decreased association between promotions and enjoyment. When added into the impulse buying equation, enjoyment stays positively associated with the outcome. As a result, outcomes differentiate the level of connection to the antecedent from the significance of the mediator in the last purchasing equation (Lamis et al., 2022). These are individual components of the mediated process and should not be combined to form a general ranking.

The descriptive model of the enjoyment pathway explains about 20.3% of the overall association. The savings pathway is coexistent with it, showing the financial and experiential interpretation can be taken together in promotional analysis. The model cannot be and does not need to be enjoyment-dependent or enjoyment-driven. Rather, sees them as simultaneous inner responses (Secapramana et al., 2021). This configuration can be helpful in figuring out where consumers are likely to appreciate the monetary savings they are aiming for when they hear about promotions, but also the emotional experience they might have while considering offers.

5.4 Meaning of complementary partial mediation

There is a positive direct association of 0.230 and a combined indirect association of 0.237 with the decomposition. These magnitudes are similar to each other and suggest a significant direct effect as well as the part played by the mediators. It is thus a suitable statistical description to speak of complementary partial mediation. It is aware of the relevance of the two mechanisms selected and maintains the relation between the general evaluation of the promotion and the conditional impulse buying.

This is combined with an explained variance for impulse buying of 38.4%. It reveals the combined explanatory power of the three predictors on the outcome construct. It's not a percentage change in buying and it's not a percentage of consumers that make impulse purchases (Wahyuni & Setyawati, 2020). Likewise, the standardised coefficients represent relative changes in the level of each score of the constructs in the specific model, and not changes in monetary spending. By retaining these differences, the results are given a clean behavioural interpretation and it avoids throwing the practical discussion out of context beyond what was estimated in quantities.

Predictive results offer the additional view of empirical usefulness (Christanto & Aprillia, 2023). Under the reported procedure, the errors made by the model when it is held-out are always smaller than the linear benchmark and the errors made by the model at the construction level are similar to the errors at the in-sample level. This pattern supports the explanatory findings and demonstrates the roles of the specified relations are practically predictive in the recorded validation exercise. The contribution is in the fact that the results of measurements, structural relationships and indirect decomposition and a comparison on benchmarks are considered together.

6. THEORETICAL AND PRACTICAL IMPLICATIONS

6.1 Implications for consumer behaviour theory

It helps to develop a holistic theory of promotional purchasing, linking an appraised buying stimulus to the consequences of buying behavior via economic and experiential states. Perceived savings refers to how the offer is experienced from a financial perspective, engagement from an affective perspective is actually shopping enjoyment. All positive relationships of these mechanisms are maintained simultaneously due to their positive relationships with impulse buying. This formulation, unlike a discount to buy link, gives a more differentiated account of ‘promotional response' than such a link does when it comes to buying because it also accounts for internal evaluations.

The first contribution has to do with the difference between apparent economic prudence and behavioural spontaneity. The savings construct is used to record positive evaluations in terms of cost savings of products acquired or effective use of a budget. Impulse buying is a positive association that shows it can be a favourable transaction evaluation while an action occurs without any planning (Sherlin et al., 2022). Thus, the economic evaluation and spontaneity can be combined in a purchasing account. The model allows for them to recognize their relationship, without asking the consumer to stop thinking about his or her finances.

It is also the parallel mediation structure which makes interpretation of indirect effects clearer. A mediator can be highly connected with the outcome and have a less indirect relationship because the mediator may have a less indirect relationship with the antecedent. This distinction is reflected in the enjoyment results. As a result, using both links from each pathway will give a more informative picture than using only the mediator outcome coefficients. The framework thus provides a good analytical foundation for the analysis of the various internal responses in relation to promotional appeal and purchasing behaviour.

6.2 Implications for promotional communication

One of the things that a promotional communication must do is make it easy for the financial implications of an offer to be evaluated. Price, discount, eligibility requirements, voucher restrictions and the final amount consumers will have to pay can be displayed in one location so that the consumer can evaluate the transaction

without sifting through the terms on multiple screens (Temel & Armağan, 2022). Meaningful economic interpretation is important to promotional response, as the positive savings pathway indicates. Transparent communication helps to support that interpretation and aids in differentiating an alluring headline dollar reduction from the real amount the customer needs to spend to be able to complete the purchase.

Retailers can also tie in the message of the promotion with the benefit that the promotion is providing. Different calculations for the consumer can stem from a percentage reduction, fixed value voucher, and reduced-price bundle. Those calculations might be easier to follow with clear examples of what the final amount payable would be. These implementation decisions are additional suggestions that result from the savings mechanism and were not an outcome of the testing that was done for this study. They are meant to be able to link to the marketing appeal, along with to provide clear transaction information and minimize confusion when it comes to buy.

6.3 Implications for shopping experience and consumer control

The enjoyment pathway implies that the enjoyment aspect of browsing should be considered as well as price communication. Useful comparisons, coherent product presentation, accessible navigation and relevant organisation of offers can foster a pleasant promotional shopping experience. Management's goal may be to make exploration comprehensible and entertaining, but keep the product suitability and cost items open and transparent. The model confirms the importance of enjoyment, and some interface features are to be regarded as options rather than explanatory variables separately assessed (Wang et al., 2022).

This should be accompanied by consumer control. Organised basket summaries, visible totals, easy removal of unwanted products, and an easy final review can make the consumers look at further purchases before paying. All of these features cater to the same behavioural context that one finds unplanned additions and spontaneous decisions to come into existence. They enable the opportunity of both enjoyable discovery and opportunity for thoughtful review. The practical implication is to create promotional environments that have a value to communicate and inform the customer during the transaction.

The economic distinction found in the discussion can be applied by the consumers by comparing the amount saved and the total amount they wish to spend. An increase in an extra product may lead to an increase in total spending, if the price of the product falls. This distinction can be obvious when you see the basket on screen, compared with a shopping list or budget that you had originally planned (Bashar et al., 2023). These recommendations are based on the joint relevance of savings perceptions and spontaneous buying and offer a meaningful approach of assessing offers without discounting what consumers might gain from them.

CONCLUSION

The aim of this study is to investigate the relationship between discount promotion and impulse buying behavior considering the integrated model of perceived savings and shopping enjoyment for the ecommerce consumers in Bangladesh. 390 eligible and complete records were analyzed providing support for all five direct and both specific indirect hypotheses. Discount promotions are directly and indirectly (via the two intervening factors) positively associated with impulse buying. The Total Estimated Association is 0.467 and the Model accounts for 38.4% of variance in impulse buying behaviour. Findings are underpinned by a good construct measurement and a consistent comparison with linear prediction benchmark.

The main conclusions are that promotional purchasing is a fusion of economics and experience. Perceived savings create a pathway through which an attractive offer is financially justifiable, and shopping enjoyment is a pathway through which promotes exploration is engaging. Both are in direct relation with spontaneous buying and run on a positive relationship. Clear information about the savings; ease of browsing; and a chance to reflect on spending behavior can thus help in a promotional strategy. These implications together, link the observed statistical trend with a real-world understanding of the relationship between attractive internet offers and unplanned buying.

Abbreviations: DP discount promotions, PS perceived savings, SE shopping enjoyment, IBB impulse buying behaviour, AVE average variance extracted, HTMT heterotrait–monotrait ratio, VIF variance inflation factor, RMSE root mean squared error, MAE mean absolute error.

REFERENCE

1. Adaikkalam Zabihi, S., Ashtiani, M., Karlberg, M., Sami, M., & Toosi, N. (2025). Aspirational Trends in Social Science Methodology. *The Journal of Bahá'í Studies*, *35*(3), 7–44. https://doi.org/10.31581/jbs-35.3.601(2025)
2. Anugrah, A. F., Pratama, F. R., & Hidayatullah, S. A. (2023). MOBILE PROMOTION: PUSH-NOTIFICATION BY E-COMMERCE APPS, ARE YOU BEING IMPULSIVE WHEN YOU GET A PROMO? *EKBIS (Ekonomi & Bisnis)*, *11*(1), 27–42. https://doi.org/10.56689/ekbis.v11i1.1024
3. Balwan, A. K., Balwan, W. K., & Saba, N. (2022). Glance of Research Methodology for Researchers: A Logical Assessment. *Scholars Bulletin*, *8*(3), 95–100. https://doi.org/10.36348/sb.2022.v08i03.004
4. Bashar, A., Singh, S., & Pathak, V. K. (2023). The Influence of Culture on Impulse Buying Behavior: A Systematic Literature Review. *Brazilian Business Review*, *20*(4), 465–484. https://doi.org/10.15728/bbr.2022.1221.en
5. Chen, Y. (2023). Methodology. In Y. Chen, *Surface Plasmon Resonance Imaging* (Vol. 95, pp. 91–164). Springer Nature Singapore. https://doi.org/10.1007/978-981-99-3118-7_4
6. Christanto, J. M., & Aprillia, A. (2023). Peran Emosi sebagai Variabel Mediasi pada Flash Sale Shopee dan Pembelian Impulsif. *Sang Pencerah: Jurnal Ilmiah Universitas Muhammadiyah Buton*, *9*(1), 55–67. https://doi.org/10.35326/pencerah.v9i1.2954
7. Desai, A. (2020). Impulse buying – demographic aspect. *Journal of Management Research and Analysis*, *5*(3), 236–238. https://doi.org/10.18231/2394-2770.2018.0037
8. Gatot Wijayanto, Arwinence Pramadewi, Jushermi, Aulya Anindita Pratiwi, & Muhammad Syafi'i. (2023). The Effect of Sales Promotion and Shopping Lifestyle on Impulse Buying with Positive Emotion as a Mediating Variable for Shopee Customers in Pekanbaru City. *Jurnal Multidisiplin Madani*, *3*(2), 425–432. https://doi.org/10.55927/mudima.v3i2.2389
9. Harwood, S. (2023). Complex Problems and Dealing with them on a Research Methods Course in a Business School. *Systemic Practice and Action Research*, *36*(4), 587–607.
10. https://doi.org/10.1007/s11213-022-09624-w
11. Hernita, N., Istiono, D., & Z Nur, L. (2022). Budaya Hedonic Shopping Motivation dan Sales Promotion terhadap Impulse Buying Pengguna E-Commerce Shopee. *Titian: Jurnal Ilmu Humaniora*, *6*(2), 194–210. https://doi.org/10.22437/titian.v6i2.21597
12. Lamis, S. F., Handayani, P. W., & Fitriani, W. R. (2022). Impulse buying during flash sales in the online marketplace. *Cogent Business & Management*, *9*(1), 2068402. https://doi.org/10.1080/23311975.2022.2068402
13. Lee, C.-H., Chen, C.-W. D., Huang, S.-F., Chang, Y.-T., & Demirci, S. (2021). Exploring consumers' impulse buying behavior on online apparel websites: An empirical investigation on consumer perceptions. *International Journal of Electronic Commerce Studies*, *12*(1). https://doi.org/10.7903/ijecs.1971
14. Marjerison, R. K., Hu, J., & Wang, H. (2022). The Effect of Time-Limited Promotion on E-Consumers' Public Self-Consciousness and Purchase Behavior. *Sustainability*, *14*(23), 16087. https://doi.org/10.3390/su142316087
15. Martaleni, M., Hendrasto, F., Hidayat, N., Alfandy Dzikri, A., & Nyoman Kerti Yasa, N. (2022). Flash sale and online impulse buying: Mediation effect of emotions. *Innovative Marketing*, *18*(2), 49–59. https://doi.org/10.21511/im.18(2).2022.05
16. Mimansha Patel & Nitin Patel. (2019). *Exploring Research Methodology: Review Article*. https://doi.org/10.5281/ZENODO.3987853
17. Moura, M., & Neves, R. (2025). Methodology. In M. Moura & R. Neves, *Using Fundamental Analysis and an Ensemble of Classifier Models Along with a Risk-Off Filter to Select Outperforming Companies* (pp. 27–52). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-62061-4_3
18. Rani, N. M., & S, C. (2023). A Study on Impulsive Buying Behaviour in Online Shopping. *International Journal of Professional Business Review*, *8*(3), e01237.

https://doi.org/10.26668/businessreview/2023.v8i3.1237
19. Ronaldo Yolanda Putra, Syifa Nurul Fadillah, Annisa Afifah Nugroho, & Ifta Firdausa Nuzula. (2022). Analysis of Factors Contributing to Impulse Buying Behavior of E-Commerce Users. *Journal of Management Studies and Development*, *1*(01), 48–67. https://doi.org/10.56741/jmsd.v1i01.43
20. Secapramana, L. V. H., Magdalena, G. J., & Yuwanto, L. (2021). *Impulsive Buying, Post-purchase Regret, and Credit Card*. 2nd International Conference on Business and Management of Technology (ICONBMT 2020). https://doi.org/10.2991/aebmr.k.210510.002
21. Sherlin, I., Budaya, I., & Bustami, E. (2022). PRICE DISCOUNT, BONUS PACK, AND HEDONIC VALUE TOWARDS ONLINE SHOP IMPULSE BUYING: A CASE STUDY ON PRIVATE COLLEGE STUDENTS IN SUNGAI PENUH CITY. *Journal of Business Studies and Mangement Review*, *5*(2), 242–247. https://doi.org/10.22437/jbsmr.v5i2.17292
22. Shiferaw, R., Bogale, A., & Debela, K. (2022). Implementing Research Methods with Confidence: A Review of Research Methodology: A Step-by-Step Guide for Beginners. *The Qualitative Report*. https://doi.org/10.46743/2160-3715/2022.6024
23. Temel, E., & Armağan, E. (2022). Teleporting to the World of Online Shopping! Online Flow Experience and its Mediating Role between Virtual Store Atmosphere, Sales Promotions and Impulsive Buying. *International Journal of Management and Administration*, *6*(12), 238–262. https://doi.org/10.29064/ijma.1121520
24. Thakur, C., Diwekar, A., Reddy, B. J., & Gajjala, N. (2020). A Study of the Online Impulse Buying Behaviour during COVID-19 Pandemic. *International Journal of Research in Engineering, Science and Management*, *3*(9), 86–90. https://doi.org/10.47607/ijresm.2020.294
25. Usadi, M. P. P., Dwinata Js, I. P. W., & Wibawa, I. W. S. (2023). What Factors Stimulate Impulse Buying in Live Commerce? *E-Mabis: Jurnal Ekonomi Manajemen Dan Bisnis*, *24*(1), 102–112. https://doi.org/10.29103/e-mabis.v24i1.975
26. Wahyuni, R. S., & Setyawati, H. A. (2020). Pengaruh Sales Promotion, Hedonic Shopping Motivation dan Shopping Lifestyle Terhadap Impulse Buying Pada E-Commerce Shopee. *Jurnal Ilmiah Mahasiswa Manajemen, Bisnis Dan Akuntansi (JIMMBA)*, *2*(2), 144–154. https://doi.org/10.32639/jimmba.v2i2.457
27. Wang, Y., Pan, J., Xu, Y., Luo, J., & Wu, Y. (2022). The Determinants of Impulsive Buying Behavior in Electronic Commerce. *Sustainability*, *14*(12), 7500. https://doi.org/10.3390/su14127500
28. Yaprak, İ., & Coban, S. (2023). The Mediating Role of Hedonic Buying Behavior in The Effect of Consumers' Attitudes Towards Social Media Ads on Impulse Buying Behavior. *Ege Akademik Bakis (Ege Academic Review)*. https://doi.org/10.21121/eab.1210790
29. Zhang, M., & Shi, G. (2022). Consumers' Impulsive Buying Behavior in Online Shopping Based on the Influence of Social Presence. *Computational Intelligence and Neuroscience*, *2022*, 1–8. https://doi.org/10.1155/2022/6794729

APPENDIX

Questionnaire

Discount Promotions and Impulse Buying Behaviour: Evidence from E-Commerce Consumers in Bangladesh

Participant information

Dear Participant,

You are invited to participate in an academic study examining how discount promotions relate to impulse buying behaviour among e-commerce consumers in Bangladesh.

Participation is voluntary. You may decline to answer any question or discontinue before submitting your responses. The questionnaire does not request your name, telephone number or email address. Responses will be analysed collectively for academic research purposes.

The questionnaire takes approximately 5–7 minutes to complete. There are no right or wrong answers. Please respond honestly based on your own online shopping experiences.

For this study, e-commerce includes purchasing products through websites, mobile applications and social commerce sellers, including Facebook-based businesses. Discount promotions refer to temporary price reductions, percentage discounts, sale prices and discount vouchers or promotional codes that reduce a product's price.

Section A: Consent and eligibility

A1. Do you voluntarily agree to participate in this study?

- Yes
- No → End questionnaire.

A2. Are you aged 18 years or above?

- Yes
- No → End questionnaire.

A3. Do you currently live in Bangladesh?

- Yes
- No → End questionnaire.

A4. Have you purchased any product through an e-commerce platform within the past six months?

- Yes
- No → End questionnaire.

A5. Have you encountered a discount promotion while shopping online within the past six months?

- Yes
- No → End questionnaire.

Section B: Respondent profile and online shopping experience

B1. What is your age group?

- 18–24 years
- 25–34 years
- 35–44 years
- 45–54 years
- 55 years or above

B2. What is your gender?

- Woman
- Man
- Another identity
- Prefer not to say

B3. What is your highest completed level of education?

- Below secondary education
- Secondary School Certificate or equivalent
- Higher Secondary Certificate or equivalent
- Diploma or equivalent
- Bachelor's degree
- Postgraduate degree or above
- Other

B4. What is your current main employment status?

- Student
- Salaried employee
- Self-employed or business owner
- Homemaker
- Currently unemployed
- Retired
- Other

B5. What is your average monthly personal income in Bangladeshi taka?

- No personal income
- Below BDT 15,000
- BDT 15,000–29,999
- BDT 30,000–49,999
- BDT 50,000–74,999
- BDT 75,000 or above

- Prefer not to say

B6. How would you describe your current place of residence?

- Urban
- Semi-urban
- Rural

B7. How frequently have you purchased products online during the past six months?

- Less than once per month
- Approximately once per month
- Two or three times per month
- Approximately once per week
- More than once per week

B8. Which online shopping channel have you used most frequently during the past six months? Select one.

- Multi-seller marketplace website or application
- Brand or retailer website or application
- Facebook page, group or shop
- Other social media shopping channel
- Other

B9. Which product category have you purchased most frequently online during the past six months? Select one.

- Clothing, footwear and accessories
- Beauty and personal care
- Electronics and accessories
- Groceries and household essentials
- Home and living products
- Books and stationery
- Other

Section C: Study statements

Response	Meaning
1	Strongly disagree
2	Disagree

3	Neither agree nor disagree
4	Agree
5	Strongly agree

C1. Discount Promotions (DP)

Code	Statement	1	2	3	4	5
DP1	The discount offers I encountered while shopping online were attractive.					
DP2	The price reductions offered through online promotions were substantial.					
DP3	Online discount promotions offered worthwhile price reductions.					
DP4	The discount deals available online were appealing to me.					
DP5	Overall, I found online discount promotions compelling.					

C2. Perceived Savings (PS)

Code	Statement	1	2	3	4	5
PS1	Buying products through online discount promotions helped me save money.					
PS2	Online discount promotions reduced the amount I needed to pay for products.					
PS3	I could obtain the same products at a lower cost through online discount promotions.					
PS4	Online discount promotions helped me make better use of my shopping budget.					
PS5	The monetary savings available through online discount promotions were meaningful to me.					

C3. Shopping Enjoyment (SE)

Code	Statement	1	2	3	4	5
SE1	Shopping online when discount promotions were available was enjoyable.					
SE2	Browsing discounted products online was entertaining.					
SE3	Looking through online discount offers was a pleasant experience.					
SE4	Exploring online discount promotions was exciting.					
SE5	Overall, shopping during online discount promotions was fun.					

C4. Impulse Buying Behaviour (IBB)

Code	Statement	1	2	3	4	5
IBB1	I made online purchases that I had not planned before starting to browse.					
IBB2	I bought products online spontaneously.					
IBB3	I purchased products online in response to a sudden urge.					
IBB4	I bought products online without thinking carefully beforehand.					
IBB5	I purchased additional products online beyond those I originally intended to buy.					

Thank you for participating in this study.